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54549 7590 10/17/2013 CARLSON, GASKEY & OLDS/PRATT & WHITNEY c/o CPA Global P.O. Box 52050 Minneapolis, MN 55402			EXAMINER CHEN, KEATH T	
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JAMES W. NEAL, MICHAEL J. MALONEY,  
DAVID A. LITTON, and CHRISTOPHER MASUCCI

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Appeal 2012-008422  
Application 12/196,368  
Technology Center 1700

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Before TERRY J. OWENS, ROMULO H. DELMENDO, and  
DONNA M. PRAISS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 5-15 and 21-24. We have jurisdiction under 35 U.S.C. § 6(b).

### *The Invention*

The Appellants claim a deposition apparatus. Claim 1 is illustrative:

1. A deposition apparatus comprising:
  - a coating chamber;
  - a coating zone configured to receive work pieces within the coating chamber for coating the work pieces;
  - a heating source for heating the coating zone; and
  - a thermal hood within the coating chamber adjacent to the coating zone for controlling a temperature of the coating zone, the thermal hood comprising a semi-cylindrical wall that wraps partially around the coating zone such that the coating zone is within the volume of the semi-cylindrical wall.

### *The References*

Rendell	US 5,180,612	Jan. 19, 1993
Courtright	US 5,998,003	Dec. 7, 1999
Conte	US 6,508,632 B1	Jan. 21, 2003
Bruce	US 2003/0203127 A1	Oct. 30, 2003
Wortman	US 2006/0062912 A1	Mar. 23, 2006
Shang	US 7,022,948 B2	Apr. 4, 2006
Nakanishi	US 2007/0234959 A1	Oct. 11, 2007

### *The Rejections*

The claims stand rejected as follows: claims 1, 5-15 and 21-24 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, claims 23 and 24 under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the subject

matter which the Appellants regard as the invention, claims 1, 5, 7-9, 12-14, 23 and 24 under 35 U.S.C. § 103 over Bruce in view of Rendell, claim 6 under 35 U.S.C. § 103 over Bruce in view of Rendell and Shang, claim 10 under 35 U.S.C. § 103 over Bruce in view of Rendell and Wortman, claim 11 under 35 U.S.C. § 103 over Bruce in view of Rendell and Conte, claim 15 under 35 U.S.C. § 103 over Bruce in view of Rendell and Courtright and claims 21 and 22 under 35 U.S.C. § 103 over Bruce in view of Rendell, Conte and Nakanishi.

### OPINION

We affirm the rejection under 35 U.S.C. § 112, first paragraph and reverse the rejections under 35 U.S.C. § 112, second paragraph and 35 U.S.C. § 103.

#### *Rejection under 35 U.S.C. § 112, first paragraph*

For an applicant to comply with the 35 U.S.C. § 112, first paragraph, written description requirement, the applicant's specification must "convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention." *Carnegie Mellon University v. Hoffmann-La Roche Inc.*, 541 F.3d 1115, 1122 (Fed. Cir. 2008), quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991).

The Examiner argues that the Appellants' original disclosure lacks written descriptive support for "the coating zone is within the volume of the semi-cylindrical wall" in independent claim 1 and "the coating zone is within the volume of the semi-cylindrical thermal hood" in independent claim 12 (Ans. 5).

The Appellants argue that the plain meaning of “within” “does not require that one thing be entirely in another thing” (Br. 5).

The plain meaning of “within” is “in or into the interior : INSIDE”,<sup>1</sup> where “inside” means “an interior or internal part : the part within”.<sup>2</sup> Thus, the plain meaning of “within” is inside, not at least partially inside as argued by the Appellants.

The Appellants argue that “Figure 1 shows at least a portion of the coating zone is within the volume of the thermal hood” (Br. 4), “the original specification (paragraph 14) discloses that the coating zone is the spacial [sic] volume where the work pieces will be coated”, *id.*, and “the claims do not recite or imply that the coating zone is totally within the volume of the thermal hood” (Br. 5).

According to the above ordinary meaning of “within”, the Appellants’ claim term “within” requires that the coating zone is “inside”, i.e., totally within, the semi-cylindrical wall (claim 1) or thermal hood (claim 12). Thus, the Appellants’ claim term “within” does not include “at least partially within”. The Appellants’ Figure 1 merely provides written descriptive support for the coating zone (30) being partially within, not totally within, the semi-cylindrical wall or thermal hood (32).

Thus, we are not persuaded of reversible error in the rejection under 35 U.S.C. § 112, first paragraph.

*Rejection under 35 U.S.C. § 112, second paragraph*

“[T]he indefiniteness inquiry asks whether the claims ‘circumscribe a particular area with a reasonable degree of precision and particularity.’”

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<sup>1</sup> WEBSTER’S NEW COLLEGIATE DICTIONARY 1347 (G. & C. Merriam 1973).

<sup>2</sup> *Id.* at 597.

*Marley Mouldings Ltd. v. Mikron Industries, Inc.*, 417 F.3d 1356, 1359 (Fed. Cir. 2005), quoting *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971).

The Examiner argues: “The term ‘approximately 180° around . . .’ in claims 23-24 is a relative term which renders the claim indefinite. The term ‘approximately’ is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention” (Ans. 5).

Terms such as “about” and “approximately” permit some tolerance. *See In re Ayers*, 154 F.2d 182, 185 (CCPA 1946). The Appellants’ Specification states that “[the] extent that the thermal hood 32 wraps around the perimeter may vary in other examples, but in the disclosed example [Figure 1] the thermal hood 32 wraps approximately 180° around the perimeter” (¶ 0017). The Examiner has not addressed the Appellants’ original disclosure and established that in view thereof, “approximately 180°” would not have circumscribed a particular area with a reasonable degree of precision and particularity to one of ordinary skill in the art. The Examiner’s mere assertion to that effect is insufficient for establishing a *prima facie* case of indefiniteness.

Accordingly, we reverse the rejection under 35 U.S.C. § 112, second paragraph.

#### *Rejections under 35 U.S.C. § 103*

We need to address only the independent claims (1 and 12). Those claims require a “thermal hood comprising a semi-cylindrical wall that wraps partially around the coating zone” (claim 1) and “a semi-cylindrical

thermal hood within the coating chamber that at least partially surrounds the coating zone” (claim 12).<sup>3</sup>

Bruce discloses an electron beam physical vapor deposition apparatus for applying a ceramic coating to components such as a gas turbine engine components, comprising an arc-shaped heating element (40) positioned above components (20) being coated (¶¶ 0002, 0004, 0020, 0025; Fig.). “The heating element **40** can be of any suitable type, such as an externally-powered radiant heating device or a reflector plate that radiates heat emitted by the molten pool **36** of the ingot **24** back toward the components **20**” (¶ 0025). “[T]he heating element **40** can be positioned relatively close to the components **20** with an actuator **26** to maximize heating of the components **20** at the beginning of a campaign, and then moved away from the components **20** as the temperature within the coating chamber **14** rises during the campaign to reduce heat transfer from the element **40** to the components **20**.” *Id.*

Rendell discloses an “apparatus for coating a cylinder (particularly but not exclusively the wiping cylinder of an intaglio printing machine) with a fluid material (e.g. a heat-hardening plastics material) which hardens to a resilient coating” (col. 1, ll. 8-12). The apparatus comprises a fume extraction hood (14) whose cavity contains an internally heat-insulated stainless steel reflector (52) having attached to its inside curvature a plurality of ceramic tile electric heating elements (30) (col. 4, ll. 16-29). “The coating **32** on the cylinder **12** is carried round the periphery of the roller [sic,

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<sup>3</sup> The Examiner does not rely upon the additional references applied to dependent claims to remedy the deficiency in the references applied to the independent claims (Ans. 7-9).

cylinder] **12** into the region where it is subject to the heating effect of the heaters **30** so that, by the time it arrives again at the space **27** above the nip **29**, it has already hardened sufficiently to receive a further coating of the fluid material on top” (col. 6, ll. 3-8; Fig. 2).

The Examiner argues that “[a]t the time the invention was made, it would have been obvious to a person having ordinary skill in the art to have adopted the shape and positional relationship of the reflector, as taught by [Rendell], as the reflector heating element 40 (the claimed semi-cylindrical thermal hood), for its suitability with predictable results. The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. MPEP 2144.07” (Ans. 6).

To establish a prima facie case of obviousness an Examiner must show that one of ordinary skill in the art would have had both an apparent reason or suggestion to modify the prior art as proposed by the Examiner and predictability or a reasonable expectation of success in doing so. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007); *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991).

The Examiner’s argument is directed toward only the predictability or reasonable expectation of success requirement and does not establish that the applied references would have provided one of ordinary skill in the art with an apparent reason or suggestion to modify Bruce’s heating element (40) as proposed by the Examiner.

The Examiner argues that “[Bruce] teaches the heating element 40 can be positioned relatively close to the components 20 with an actuator 26 to maximize heating of the components 20 and [Rendell] teaches a semi-cylindrical reflector wrap around the coating zone. A person of ordinary

skill would have known to adopt the semi-cylindrical reflector wrap around the coating zone to achieve the function of relatively close to the components 20” (Ans. 12).

The Examiner does not explain how one of ordinary skill in the art, in view of the applied references, would have known to make Bruce’s heating element (40) semi-cylindrical. The Examiner’s mere speculation to that effect is not sufficient for establishing a prima facie case of obviousness. *See In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967); *In re Sporck*, 301 F.2d 686, 690 (CCPA 1962).

The Examiner argues that “the reflector’s function is clearly the same no matter the heated material is plastic or turbine” (Ans. 12).

The Examiner apparently is arguing that one of ordinary skill in the art would have substituted any reflector for any other reflector merely because they both reflect. That argument is not well taken because the Examiner has not supported it with evidence.

Rendell’s reflector (52) is semi-cylindrical to conform to the surface of a rotating cylindrical roller (12) so that ceramic tile electric heating elements (30) positioned along the reflector (52)’s inside curvature heat a plastic coating (32) on the rotating cylindrical roller (12) sufficiently that by the time the coating (32) arrives at a nip (29) where coating material is applied to the cylindrical roller (12), the coating (32) has hardened sufficiently that a further coating can be applied thereon (col. 4, ll. 16-29; col. 6, ll. 3-8; Fig. 3). The Examiner has not established that the applied references would have provided one of ordinary skill in the art with an apparent reason or suggestion to use Rendell’s reflector (52) configuration

for Bruce's heating element (40) used to heat components (20) by electron beam physical vapor deposition (§§ 0020, 0025).

Hence, the record indicates that the Examiner's reason for modifying Bruce's heating element (40) as proposed by the Examiner is based upon impermissible hindsight in view of the Appellants' disclosure. *See In re Warner*, 379 F.2d at 1017 ("A rejection based on section 103 clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art"). Accordingly, we reverse the rejections under 35 U.S.C. § 103.

#### DECISION/ORDER

The rejection of claims 1, 5-15 and 21-24 under 35 U.S.C. § 112, first paragraph, written description requirement, is affirmed. The rejections of claims 23 and 24 under 35 U.S.C. § 112, second paragraph and the rejections under 35 U.S.C. § 103 of claims 1, 5, 7-9, 12-14, 23 and 24 over Bruce in view of Rendell, claim 6 over Bruce in view of Rendell and Shang, claim 10 over Bruce in view of Rendell and Wortman, claim 11 over Bruce in view of Rendell and Conte, claim 15 over Bruce in view of Rendell and Courtright and claims 21 and 22 over Bruce in view of Rendell, Conte and Nakanishi are reversed.

It is ordered that the Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

kmm